



EMERGENCY DISEASE PROGRAM FACTSHEET

Animal Health and Food Safety Services Animal Health Branch



Surveillance and Reporting of Arboviral Encephalomyelitides in Horses and Ratites in California June 2000



Introduction

Arboviral encephalitides are an important group of infectious diseases affecting horses, ratites (ostriches, emus, rheas, etc.), and humans. The California Department of Health Services (DHS) and the California Department of Food and Agriculture (CDFA) provide free diagnostic serological testing annually for western equine encephalitis (WEE).

The participation of veterinarians and others in the Arboviral Encephalitis Surveillance Program over the years has provided invaluable information for the prevention and control of these diseases in both humans and animals. Equine and ratite encephalitis cases serve as an indicator of the potential public health hazards associated with infected mosquitoes in an area. Mosquito abatement district managers obtain information on the location of animal cases as soon as possible and take steps to eliminate infected mosquitoes in their district. The current surveillance program emphasizes coordination with District Animal Health Veterinarians, prompt submission of samples, and prompt notification of test results to submitting veterinarians. We encourage veterinary practitioners to take full advantage of the State's support in screening suspect equine and ratite cases for viral encephalitis.

Veterinary practitioners are on the "frontline" and therefore, most likely to be the first to observe a novel disease in animals. For example, veterinarians played a key role in identifying the first documented cases of West Nile virus in the Western Hemisphere. This arbovirus caused an outbreak of encephalitis in humans and animals last summer in New York

City. To date, West Nile virus has not been found in California, but it may be yet undetected or potentially introduced. Currently, there is no vaccine available and the disease is frequently fatal in horses.

Disease Reporting

Veterinarians should **immediately** report by telephone all suspected cases of arboviral encephalitis in horses and ratites to their CDFA District Office.

Sample Submission

Blood samples (both acute and convalescent) and tissue from fatal equine cases should be forwarded to the DHS Rickettsial Disease Laboratory (VRDL) for testing. If you choose to select another laboratory for diagnostic services, additional specimens should be forwarded to DHS. General instructions are as follows:

- Specimens may be sent as whole bloods or as serum at ambient temperature. Since rabies is always a possibility in equine encephalitis cases, the brain of an animal showing neurologic signs that has died or been euthanatized should be immediately tested for rabies at the local health department laboratory before a portion is sent to the DHS VRDL. Brain tissue submitted for rabies testing should not be frozen. Submission of the intact head is preferable to brain removal if field conditions present undue risk of human rabies exposure.
- Brain tissue should be collected as soon as possible after death for encephalitis testing. If portions of the brain are submitted, they

should be placed in separate labeled containers. Ship the specimen in an insulated container with "cold packs" or wet ice to keep the specimen at 40°F (4°C) while in transit. The preferred method of submitting brain tissue is to use an overnight delivery service or courier service.

- If brain specimens cannot be received by the laboratory within 48 hours, they must be frozen and shipped on dry ice. Place specimens in screwcap bottles in protective metal containers. Wrap a submittal form around each metal container and then put into a sealed plastic bag to protect the specimen while in transit. Submit specimens in an insulated box (at least one inch thickness of Styrofoam) with 6-10 lbs. of cracked dry ice. Label the package: "Perishable - Biologic Specimen - Dry Ice - Rush". Depending on the method of shipment, you may also be required to fill out "Restricted Papers".
- A virus laboratory transmittal form should accompany each specimen. Please provide the owner's name and address, the age and location of the horse, vaccination history for EEE, VEE, or WEE, and the date(s) of such vaccination(s). Because the administration of EEE, VEE, or WEE vaccine(s) to a clinically ill horse renders interpretation of serologic results invalid, this practice should be avoided.
- Contact the California Animal Health and Food Safety Laboratory (CAHFS) Branch in your area for instructions on specimen submission for ratites.

Containers and Transmittal Forms

Specimen collection tubes and screwcap jars, transmittal forms and necessary mailing containers are available from:

- Local county health departments
- California Department of Health Services, Viral and Rickettsial

Disease Laboratory Branch, 2151 Berkeley Way, Berkeley, CA 94704.

- University of California Animal Health and Food Safety Services Laboratories
- District offices of the Animal Health Branch

Assistance Available

County health department laboratories and the University of California Veterinary Diagnostic Laboratories are familiar with the United States postal shipping regulations governing the transportation of infectious materials and will assist you with packing and shipping any brain and blood specimens. If you have any questions about appropriate specimens, packaging or shipping methods, please call the State Viral and Rickettsial Disease Laboratory Branch, at (510) 540-2573 for a consultation.

Recommend Vaccination to Clients

Encourage clients to adequately vaccinate their horses. Vaccinations should be done in late May or June before the encephalitis season begins. It is important to emphasize that once a horse has developed encephalitis, subsequent vaccination provides no benefit and will invalidate diagnostic serologic tests.

For more information, call:

CDEA, Animal Health Branch

Headquarters	(916) 654-1447
Redding District	(530) 225-2140
Modesto District	(209) 491-9350
Fresno District	(559) 237-1843
Ontario District	(909) 947-4462

University of California, CAHFS

Davis Branch	(530) 752-5680
Fresno Branch	(559) 498-8097
San Bernardino Branch	(909) 383-4287
Tulare Branch	(559) 688-7543
Turlock Branch	(209) 634-5837

Or DHS, Veterinary Public Health Section

(916) 327-0332

Or the **USDA Area Office** (916) 857-6170
or *toll free* (877) 741-3690.